

*grandis* (Des.) from Langollen (50); v, vi 1855, J. S. Ashworth (*Zoologist*, 1855); vii 1860, C. S. Gregson (*Ent. Weekly Intellegencer* 1880); 1862, N. Greening (*Zoologist*, 1862). It is unlikely that this handsome moth associated with rotten wood was mis-identified though the late Wm. Mansbridge in the 1920's searched at Llangollen for moth and larva without success.

## BUTTERFLIES ON MARTHA'S VINEYARD ISLAND

By DR. C. J. LUCKENS\*

My family and I spent the month of August 1979 on Martha's Vineyard, a small island off the coast of Massachusetts about three miles from the nearest point of the Cape Cod mainland. This island has a land area of approximately 100 square miles and encompasses diverse habitats including saltmarsh, dune, meadowland, extensive scrub and woodland and a few freshwater bogs. The lepidoptera of Martha's Vineyard and its neighbouring island of Nantucket has been surveyed by F. M. Jones and C. P. Kimball (1943), and they were able to record 1227 species from the former island.

My wife's family have had their home on Martha's Vineyard for many years and this was my second visit to the island, the previous occasion being in 1968. Rather surprisingly during these two short visits I was able to add a butterfly species unrecorded in the Jones and Kimball list. This was the distinctive little skipper *Pholisora catullus* Fab., The Common Cloudywing, which I took once only in 1968 but which appeared to have become quite common 11 years later. A parallel seemed to have occurred among the birds — the splendid scarlet and black Cardinal, either rare or absent in 1968, had become in the interim a frequent visitor to my father-in-law's garden just outside Vineyard Haven.

This garden proved to be a harbour for many butterfly species. Between the lawns and the sea was a strip of grass and scrub where wild flowers grew in plenty and around the property were various trees and shrubs such as sassafras and wild cherry, foodplants of several butterflies. The Swallowtails, in particular, were much in evidence, two black species being quite common. One of these, *Papilio troilus* L., was frequent in the larval stage on the aromatic sassafras where the spectacular 'eyed' caterpillars, (superficially like a green version of an Elephant Hawkmoth larva), make 'tents' by turning over the irregular leaves. These dwellings were very easy to spot. In 1968 I had found many of the very similar larvae of *Papilio glaucus* L. on wild cherry but this year failed to find any though I saw several of the magnificent yellow imagines and searched persistently for the early stages.

The commonest Swallowtail was the black *Papilio polyxenes* Fab. Drinking coffee on the veranda before breakfast was especially pleasurable as I could watch the velvety females ovipositing on my father-in-law's carrot plants!

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There are 23 skipper species recorded for the island, the genus *Erynnis* Schr. comprising more than any other. I found two of these 'Duskywings'; the widespread *Erynnis horatius* Scudd. & Berg. and the rather local *E. baptisiae* Fbs., the latter being confined to areas where its sole pabulum, wild Indigo, occurs. Three frequent *Hesperids* were the tiny *Ancyloxpha numitor* Fab., *Polites coras* Cram. and the large dashing *Epagyreus clarus* Cram. Throughout the island the last was common in the larval stage within leaf 'tents' on wild Acacia trees. The least common of the skippers we encountered was *Polites themistocles* Latr., and this species was found mainly on the grassland adjoining Martha's Vineyard State Forest.

The State Forest, a misleading title to a European, is, in fact, an extensive wild area of scrubby woodland covering much of the centre of the island. It was the last refuge in North America of the now extinct Heath Hen, an eastern close relative of the Prairie Chicken. In 1916, a devastating fire at incubation time decimated the population of this bird and from then on it declined gradually until the last male was seen here in the 1940's. The State Forest remains a fine insect locality however, and, as it is criss-crossed by paved trails for cyclists, my mother-in-law's bicycle was quickly pressed into service. The clearings and rough grassland at the edge of the woods were especially rewarding. Large numbers of *Everes comyntas* Godt., flew among the spiky native clovers (*Lespedeza* sp.) and the little *Melitaeine* butterfly *Phyciodes tharos* Dru. swarmed everywhere. *Cercyonis pegala* ssp. *maritima* Edw. (type locality Martha's Vineyard) flew around like an enormous Meadow Brown, but in spite of its loping flight it was a wary insect and deceptively difficult to net. A few *Vanessa virginiensis* Dru. were encountered but mostly in poor condition.

The deep parts of the forest were less rich but one fine species was not uncommon: *Limenitis astyanax* Fab., the Red Spotted Purple, a large dark butterfly with iridescent turquoise hindwings. These particularly favoured the half-shaded crossroads in the forest and had a habit of settling on the track in the latter part of the afternoon.

They were also to be seen in several other places on the island including the delectable little unmetalled road called Tea Lane. This curves through the woods near Chilmark and got its name from the contraband tea that was smuggled in this area in the eighteenth century when Massachusetts was a British colony. Tea Lane became a favourite collecting ground of mine, being rich in butterflies, birds and wild flowers. At the northwest entrance were large stands of Joe Pye weed (*Eupatorium*) which attracted dozens of *Danaus plexippus* L. (a common butterfly all over the island), a few *Vanessa cardui* L. and the two black Swallowtails *polyxenes* and *troilus*. The little diurnal American Bee Hawk Moths were also present in fair numbers. Further in was the domain of *L. astyanax* but on one occasion I took, with some difficulty, a superb *Polygonia interrogationis* Fab. The lane was a favourite patrolling

ground for *Lycaena phlaeas americana* Harr. — a Nearctic subspecies of the Small Copper.

Along Tea Lane, I found a sallow bush that had evidently once been the home of a larval colony of *Nymphalis antiopa* L. — the cast skins were plain to see. During our previous visit we had seen several 'Mourning Cloaks' and it was disappointing not to find the imagines this time.

A feature of entomology on the island was the variety of insect predators, some of which attacked the adult butterflies. 'Ambush Bugs' (*Phymatidae*) for example, no more than 12 mms. long, lurked in the Goldenrod flowers and it was amazing to see how they attacked large butterflies up to the size of *P. troilus*. Their victims often remained in lifelike positions and several times I stalked a Swallowtail, apparently sunning itself, only to find it, motionless in death, in the clutches of one of these little predators. Spider hunting wasps (*Pompilidae*) were also not uncommon. These did not attack lepidoptera but homed in on roving spiders, hovering around them and stinging them repeatedly before carrying them off. Robber Flies, (*Asilidne*), voracious carnivores which pounce on their victims, could also be found, but they usually preyed on other *Diptera*.

In the same area as Tea Lane, between Chilmark and West Tisbury, I found a good-sized clover field of around 6 acres. This was swarming with the two widespread North American *Colias* species. Much the commoner was the lemon-yellow *Colias philodice* Godt., and almost 30% of the females of this species were of the white form. There were also good numbers of the orange *Colias eurytheme* Boisd., and several examples showing evidence of hybridisation were also taken. A rather beautiful deep butter-yellow form of what I assume is a *eurytheme* female with mixed ancestry was taken in the State Forest later on.

One other example of island habitat was also sampled — a Cranberry bog beside the Lamberts Cove road. I hoped to find the little Copper, *Lycaena epixanthe* Boisd. & LeConte, but its flight period may well have been over and I saw no sign of it.

In mid-August my wife and I travelled up to Maine to stay for a few days with her relatives at Blue Hill. The first northern butterfly we encountered was *Hesperia comma* L. (ssp. *laurentina* Lym.) which occurred around her uncle's garden. Here also I took a single specimen of *Limenitis archippus* Cram., the *Nymphalid* that mimics the Monarch very closely. The northern race of *Cercyonis pegala* (ssp. *nephele* Kirby) was widespread. This butterfly resembles the dark Palaearctic *Satyrus actaea* L. and is of quite different aspect to the form of *pegala* found on Martha's Vineyard, which has large yellow patches on both sides of the forewing.

*C. pegala nephele* was also noted during a days outing to Mount Desert Island, part of which comprises the Acadia National Park. Throughout this island there are fine areas of mixed Canadian forest and a rocky coastline with the characteristic Jack Pines marching down almost to the tideline. We drove up Mount Cadillac, (1500 ft), on the eastern side of the island behind Bar Harbor

and stopped near the top to explore. *Hesperia comnia laurentina* was about with several fresh *Vanessa virginienses* but I was especially pleased to see a butterfly completely new to me — *Aglais milberti* Godt., which was fairly frequent on Compositae. This New World relative of the Small Tortoiseshell also feeds on nettle, apparently, but I saw no sign of this plant anywhere on Mount Desert. Driving along the coast south of Bar Harbor we spotted a smallish sulphur-coloured *Colias* beside the road, and I quickly stopped to net another personal 'first' — *Colias interior* Scudd. This male specimen was in less than good condition but nevertheless an exciting capture. The generally fine weather broke on our third day in Maine and we saw no further butterflies of note until after our return to Martha's Vineyard.

There follows a list of the butterflies noted in these two areas of New England, compared where relevant, to the Jones and Kimball list of 1943. (Hereafter abbreviated to J & K).

#### *Danaidae*

*Danaus plexippus* L.: Common throughout Martha's Vineyard 1968 and 1979.

#### *Satyridae*

*Cercyonis pegala* Fab.: Fairly common in grassy places throughout M. V. as *ssp. maritima*. Edw. 1968 and 1979.

Widespread in a different form — *ssp. nephele* Kirby, around Blue Hill and on Mount Desert Island, Maine.

*Euptychia cymela* Cram. (*eurytus* Fab.): Seen only as worn examples on M. V. in July 1968. (J & K record it as 'not rare, June and July')

#### *Nymphalidae*

*Limenitis astyanax* Fab. wooded areas on M. V. Infrequent 1968. Common 1979. Occasionally visited *buddleia* in the garden at Vineyard Haven, otherwise not usually attracted to flowers. J & K state that it is partially double-brooded on M. V. Fresh specimens were certainly seen from mid-July to August in 1968 and throughout August 1979.

*Phyciodes tharos* Dru.: Common nearly everywhere on M. V. 1968 and 1979. Even noted *inside* a taxi that we took in Vineyard Haven in September 1968!. Very worn single specimens seen at Blue Hill, Maine 1979.

*Polygonia interrogationis* Fab.: Single specimens seen in July 1968 — one inside a shop in Vineyard Haven, another two outside the local library. In 1979 several were noted in the garden near Vineyard Haven — all rather worn. 1 fresh specimen taken in Tea Lane. (J & K state 'resident but never abundant').

*Polygonia comma* Harr.: One seen sitting on a cypress bush July, 1968, near West Tisbury, M.V. J & K give only two records and remark that it is rarely seen.

*Vanessa atalanta* L.: Single specimens seen all over M. V. Several along one ride in the State Forest 1979.

*Vanessa cardui* L.: Fairly common in both woodland and gardens throughout M. V. 1979. Less prevalent in 1968.

*Vanessa virginiensis* Dru.; In contrast, this butterfly was common on M. V. in 1968 and rather scarce in 1979. Attracted to the clover fields and garden *buddleia*. Several fresh examples seen near the top of Mount Caddillac, Mount Desert Island, Maine, 1979.

*Aglais milberti* Godt.; Only seen near the top of Mount Cadillac.

*Nymphalis antiopa* L.: Several seen around Vineyard Haven and West Tisbury in 1968. Evidence of a brood of larvae on sallow in Tea Lane 1979.

*Speyeria (Argynnis) cybele* Fab.: A very worn male noted on *buddleia* in Vineyard Haven after a northerly gale (August 15th 1979) J & K comment 'unaccountably rare [Though in late June, early July 1942 it was present in small numbers at Vineyard Haven, The remaining records suggest that it is usually a vagrant from the mainland.]

*Clossiana selene* D. & S. *ssp myrina* Cram.; Single specimens taken near Vineyard Haven July 1968. Not seen 1979.

#### *Lycaenidae*

*Strymon melinus* Hüb.; On M. V. Single examples taken July 1968. Not seen 1979.

*Euristrymon Liparops* Boisd & LeConte. One taken at Lamberts Cove, M. V., 1968.

*Lycaena phlaeas ssp. americana* Harr. Widespread on M.V. One or two at Blue Hill, Maine 1979.

*Everes comyntas* Godt.; Widespread on M. V., but especially common around patches of *Lespedeza* near the State Forest, 1979. Large numbers seen on damp mud near Lamberts Cove, 1968.

#### *Pieridae*

*Pieris rapae* L. Common nearly everywhere, on M. V. Perhaps slightly less frequent further north at Blue Hill.



*Colias philodice* Godt. Abundant in clover fields M. V. Single specimens all over the island, 1968 and 1979. Several netted on Mount Desert Island in a search for *C. interior*.

*Colias eurytheme* Bdv.; Less common than its congener on M. V. but found in all suitable places. Fairly common in the clover fields. J & K point out that this butterfly was once a rare straggler to M.V. and "its present status of an abundant resident dates from 1930".

*Colias interior* Scudd.; One specimen taken near Bar Harbor, Mount Desert, Maine. A northern species.

### *Papilionidae*

*Papilio polyxenes* Fab.: Common on M. V. The larvae look identical to those of *P. machaon* L. and could be found on various *Umbelliferae* all over the island.

*Papilio troilus* L.; Most frequent in wooded areas on M. V. but present also at gardens in Vineyard Haven. Larvae common on sassafras bushes.

*Papilio glaucus* L.; Common all over M. V. in both larval and imaginal stages in 1968. A few imagines seen at Vineyard Haven and one in Tea Lane 1979.

### *Hesperidae*

*Epargyreus clarus* Cram.; Widespread and common on M.V. wherever Wild Acacia (Locust) trees grew, 1968 and 1979.

*Erynnis horatius* Scudd. & Berg. Fairly common and widespread, on M.V. 1979. One or two only, 1968.

*Erynnis baptisiae* Fbs. 2 specimens taken around Wild Indigo along Tea Lane. The foodplant grows abundantly beside the tracks in the State Forest but no larvae were found in spite of prolonged searches and no imagines of this species were seen there either. (J & K specifies the 'Plains area' ie. near the State Forest, as the best locality).

*Pholisora catullus* Fab. One taken at Vineyard Haven 1968. Not uncommon around Vineyard Haven 1979. (J & K record this very doubtfully in a supplementary list for Nantucket but not for M. V.)

*Ancyloxypha numitor* Fab. Widespread and common throughout August on M. V. 1968 and 1979.

*Hesperia leonardus* Harr.; Two taken near Vineyard Haven in early September 1968. A late season species.

*Hesperia comma* L. ssp. *laurentina* Lym. Several noted at Blue Hill and on Mount Cadillac, Maine 1979.

*Polites coras* Cram. (*peckius* Kby.); Common around Vineyard Haven. Occasional elsewhere on M. V. 1968 and 1979.

*Polites themistocles* Latr. Rather scarce around Vineyard Haven, Tea Lane and M. V. State Forest. 1979. (J & K – "occasional").

### Acknowledgements

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### References

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HERINGOCRANIA CHRYSOLEPIDELLA (ZELL.) IN KENT. – I wish to record the finding of vacant mines of this species on hazel at Hoads Wood, Bethersden on 24th May 1980 and Steps Wood, Stockbury on 26th May 1980, identification kindly confirmed by Lt. Col. A. M. Emmet. It is surprising to note this species is not recorded from Kent in Volume 1 of *The Moths and Butterflies of Great Britain and Ireland*, yet I understand that in the 1960's both the late Stan Wakely and the Editor noted the species, also on hazel, from Trottiscliffe. – N. F. HEAL, "Fosters", Detling Hill, Maidstone, Kent.